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## Technical Evaluation Report

### ***52. Audio/ Videoconferencing Packages: High cost***

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#### **Abstract**

This report compares two integrated course delivery packages: *Centra 6* and *WebEx*. Both applications feature asynchronous and synchronous audio communications for online education and training. They are relatively costly products, and provide useful comparisons with the two less expensive products to be evaluated in the following report #53. The criteria used in the current evaluation include capacity, interactivity features, integration with learning management systems, technical specifications, and cost. The report ends with a short analysis of the currently emerging audio-conferencing software, *Google Talk*.

#### **Product Trials**

##### ***1. Centra 6***

*Centra 6* is an online platform for knowledge sharing and content management. The product embraces two earlier versions, previously rated in this series (*CentraOne* and *CentraNow*). It offers conference calls over a network using voice-over-Internet-protocol (VoIP) technology, and provides interactive tools to keep participants involved during distance learning sessions.

**Capacity:** Three types of *Centra* events are offered, differing in audience size and the event's purpose. 'Conferences' are large events involving minimal interactivity (e.g., organisation-wide annual meetings), for which the vendor recommends a maximum of 1000 concurrent participants. 'Symposia' are mid-sized events with higher levels of interactivity (e.g., learning events), with a recommended maximum of 500 concurrent participants. 'eMeetings' are online meeting spaces for small groups of up to 25 participants. The maximum concurrent user recommendation relates to the server resources required to maintain high levels of interactivity.

**Interactivity Features:** *Centra* presentations are created using *PowerPoint*, and can be supplemented by other text and graphics (.txt, .htm, .html, .gif, .jpg, .jpeg), *Flash*, *Shockwave*, and audio/ video (.avi, .au, .mov, .mpg, .mp2, .ra, .rm, .wav, .wmv, and .asx). During synchronous events, the session leader(s) use interactive tools such as the Whiteboard, Web Safari (co-browsing with session participants), and AppShare (for sharing with participants applications that reside on the leader's computer). The leader can create breakout rooms in which participants form smaller subgroups for discussions and group work. The leader can make changes to the session's agenda, and can enable/disable tools as needed, during the event.

The interface is user-friendly and the features intuitive (see Figure 1). Participants enter the event via unique IDs and passwords, and can download and view content before the session. Text-chat tools are available for public use (to all participants and the leaders) and private use (to the leader only). The participants and leader(s) interact during the event using text-chat and/ or microphone headsets. They can use interactive icons (Yes/ No Polling, Raised Hand, Laughter, and Applause), and see who is speaking via a highlighted microphone next to the person's name. Each event can be recorded for future viewing on demand. Participants can maneuver through recorded material though cannot complete embedded tests or polls. Survey results and administrative details are recorded in the *Centra 6* database for each event, and can be used to generate reports.

**Figure 1.** The *Centra 6* participant interface



**Learning Management Features:** *Centra 6* contains a basic learning/ content management (LCM) tool. These features are expected to expand in Summer 2006, following the acquisition of *Centra Software* by *Saba Software*. New versions of *Saba* and *Centra* will be released containing integrated LMS/ LCMS and online delivery solutions. In its present form, *Centra* also integrates with other leading LMS products.

**Technical Specifications:** *Centra 6* operates on all current Windows platforms, permitting applications sharing by the leader and participants. The minimum requirements for the *Centra* client include:

- Windows 98, 2000 (SP1), or XP
- Internet Explorer 5.x, 6.x; Netscape 4.5x, 4.7x
- CPU: P350 MHz
- Memory: 128 MB
- Disk: 40 MB free space
- Network: 28.8 kbps
- Monitor: 16 bit colour

*Centra 6* can run on the Macintosh OS, but the vendor cautions that slower speeds are experienced. The product is not configured to run on *Linux*.

**Cost:** The product can be hosted by the vendor and licensed individually, or, as in the current evaluation, hosted on the client's secure server. Pricing models are based on client specifications and volume discounts. Hosted on an institution's site, the cost is approximately \$200 per seat, with an additional annual maintenance fee of 18% of the original cost. When it purchased *Centra*

6 in 2003, the institution that collaborated in this study received large volume discounts and agreed to be a beta test client for *Centra 7*. This arrangement cost \$135,000 for 1000 concurrent users, including 24/ 7 telephone support by the vendor, and free training for internal staff. Additional costs were associated with integrating the platform into existing technical architecture.

## 2. *WebEx* (v 7.0.10)

This similar product is a Web-based real-time communication and collaboration tool, fully hosted by the vendor. Though primarily designed for business users, it also contains features useful in online education.

**Capacity/ Cost:** The product claims to be capable of hosting an “unlimited” number of participants, but with a cost restriction. The subscription fee is \$75 per named host per month. A named host is any individual allowed to schedule and host meetings. The package has a minimum of five named hosts. Each host can hold an unlimited number of meetings, one at a time, each with a maximum of 15 participants. A more expensive pay-per-use rate is available at \$0.33 US per user/ minute. On this basis, a 100-person meeting lasting an hour would cost \$2,000. An additional charge of \$0.20 per user/ minute is made for an ‘integrated teleconference,’ which participants join by calling a toll-free number, or by callback at their own number.

**Interactivity Features:** *WebEx* supports voice-over-Internet protocol (VoIP) a wide range of media types, a whiteboard, polling, and the opportunity to make notes during meetings. The interface is easy to use. The opening screen clearly shows the participants’ identities, and provides one-click functions for accessing synchronous text-chat, audio/ videoconferencing, and documents from the hard drive or from a connected storage drive. Access to a *WebEx* session is gained when the host schedules a meeting and sends the participants an invitation via email, telephone, or messaging applications. One of *WebEx*’s major features is its ability to share the host’s desktop, multiple documents, streaming media, and other applications, in order to demonstrate software or to edit files during a meeting. Participants can view the shared application, including cursor movements, without running the application that the host is sharing with them. Annotation tools enable the participants to use a pointer, type text, draw lines, construct shapes, designate colours, and erase. Presenters can synchronise all participants, allowing everyone to view the same display at the same magnification as the presenter’s display. When communicating, the host controls who speaks, and can pass the microphone to a participant. A participant who wishes to contribute can click the Raised Hand button. Figure 2 shows a screen capture of a *WebEx* meeting with browser sharing.

**Figure 2.** A *WebEx* meeting with browser sharing



**Learning Management Features:** *WebEx* was not designed specifically for educational purposes, and is limited in its learning management capabilities. Its ability to share webpages could be used with an LMS tool. For example, a teacher could allow participants to experience audio and video effects on a webpage by using Web content sharing to open that page on their computers. The product also has the ability to record and play back sessions on demand.

**Technical Specifications:** The *WebEx Meeting Manager* requires participants to have the following minimum computer specifications. For *Windows* 95, 98, NT, 2000 and XP: an *Intel Pentium* processor with 166 MHz and 32 MB RAM. This should be JavaScript and cookies-enabled, with a 56K + internet connection. For *Mac* users: *Power PC Macintosh G3*, 64 MB RAM, Virtual Memory on, JavaScript and cookies-enabled. The latest *Internet Explorer* or *Netscape* browsers are recommended, and there are no known issues with *Solaris* or *Linux*.

### 3. Google Talk

In view of the current interest being shown in the new *Google Talk* application, we have added a preliminary examination of it to this report. This is an instant messenger package integrating PC-to-PC calls, text-based chat and email. At present, this beta product does not appear to be ready for reliable usage, and we experienced obstacles gaining access to it. In order to use it, a 'gmail' account (*Google* mail) must be created. However, 'gmail' accounts are available only to users with a United States cell phone number. Having learned that the product has been reliably used by a colleague in Sri Lanka, we attempted to create an account with Canadian and Latin American cell phone numbers, though neither were accepted. Ultimately, we used a US colleague's number to gain access. *Google Talk* provides excellent audio quality and synchronicity, but the interface contains minimal user tools and is not user-friendly. During our test of the beta version, it was not possible to share files or to create a conference area, and adding a contact was only possible if the individual had a 'gmail' account. Given the rapid expansion of other *Google* products, however (e.g., *Google Earth* and *Picasa*), it is assumed that *Google Talk* will soon become a powerful online audio-conferencing option.

## Conclusions

*Centra 6* and *WebEx* both provide intuitive, user-friendly interfaces, and the rich multimedia interactivity required for effective collaborative distance education and communication. They have excellent collaborative features such as application-sharing, Web-sharing, and whiteboard, and *Centra* provides breakout rooms for small collaborative group activities. Its ability to interface with a variety of common learning management systems makes it appealing for distance educators seeking a full-package solution, but its associated high costs are unlikely to make it popular in the educational market. *WebEx* does not integrate with other systems as it is not hosted by the customer. A centrally hosted *Centra 6* package involves a one-time payment of approximately \$200 per seat, plus an additional annual maintenance fee of 18% of the original cost. *WebEx* is more economical at \$75 per seat per month, with a minimum of five seats per package. Moreover, *WebEx* operates on *Windows*, *Linux*, *Solaris*, and *Macintosh* platforms, whereas *Centra 6* is mainly configured for *Windows* and experiences a dramatic speed reduction with *Macintosh*. *Centra 6* and *WebEx* are appropriate products for their markets, but their specific features and benefits in relation to integration with other systems, hosting and associated costs should be evaluated by customers in relation to their organisational needs.

It is also instructive to compare the features of these products with those of other audio-conferencing software provided at a fraction of the above costs (see next report).

The next report in the series examines the features of low-cost audio/ video-conferencing packages.

**N.B.** Owing to the speed with which Web addresses become outdated, online references are not cited in this report. They are available, together with updates to the current report, at the Athabasca University software evaluation site: <http://cde.athabascau.ca/softeval/>. Italicized product names in this report can be assumed to be registered industrial or trademarks.

*JPB.* Series Editor, Technical Notes

